

RESPONSE UNDER 37 C.F.R. § 1.111  
U.S. Appln. No. 09/285,649

Applicants respectfully submit that the present invention is not obvious over the disclosures of Van Wijck in view of Finneran et al and request that the Examiner reconsider and withdraw this rejection in view of the following remarks.

First of all, Van Wijck is available under 35 U.S.C. § 102(e) as of its filing date of August 29, 1997. However, the effective filing date of the present application is January 31, 1996, the filing date of the PCT application PCT/IB95/00083. Therefore, Van Wijck does not qualify as prior art against the present application.

Turning to the merits of the rejection, Applicants again respectfully traverse the Examiner's position concerning the disclosures of Finneran et al.

It appears that the Examiner recognizes that the features of present claim 10, a high pressure stripping unit and a means for directly feeding the reaction mixture leaving the urea reactor to said stripping unit, are missing from Finneran et al. The Examiner also appears to recognize that the stripping and condensing zone 14 of Finneran et al is indeed made of two separate distinct portions: a stripping portion and a condensing portion, respectively. In this respect, it is noted that a typographical error is present in the Amendment dated December 4, 2002. The sentence of page 4, lines 7-10 should read:

If these two portions of zone 14 were not separated, it would have been impossible - for instance - to withdraw from zone 14 a first liquid flow

of urea solution to be fed to zone 22 (line 24) and a distinct second liquid flow of carbamate condensate to be recycled to the reaction zone 2 (line 16).

However, it is respectfully submitted that the Examiner is not properly considering the disclosures of the Finneran et al in the attempt to read it on the present invention. At page 4, last paragraph of the Office Action dated February 12, 2003, the Examiner asserts that because ammonium carbamate is stripped and condensed in zone 14, then the returned carbamate solution (line 26) is also stripped and condensed in 14.

The Examiner appears to confuse the ammonium carbamate contained in the reaction solution leaving the urea reaction zone 2, which is indeed subjected to stripping and condensation as described in Finneran et al, column 5, lines 60-65, with the carbamate withdrawn from zone 22 and returned by line 26 to zone 14. In the latter case, the carbamate is returned to the ammonium carbamate condensate, as expressly written at column 6, lines 11-14, of Finneran et al; this means that such a returned carbamate is fed to the condensation portion of the zone 14 only, where condensate is formed and is thus present (see also Finneran et al, column 5, lines 65-67).

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In the stripping portion of zone 14 no carbamate condensate can be found, since the carbamate (coming from zone 2) fed therein is vaporized to ammonia and carbon dioxide vapors.

Thus, the Examiner's assertion that the returned carbamate solution is first stripped and then condensed does not have basis in the disclosures of Finneran et al and is in clear contradiction with the disclosures of Finneran et al.

In this respect it is noted that there is a substantial technical difference between the ammonium carbamate obtained as intermediate product of the urea synthesis and coming from the urea reaction zone 2 (see also Finneran et al., column 5, lines 47-50) and the carbamate condensate obtained by condensation of the ammonia and carbon dioxide vapors in the condensation portion of zone 14.

Finneran et al clearly and unambiguously teaches that the carbamate withdrawn from zone 22 by means of line 23 is returned by line 26 to the ammonium carbamate condensate in the condensation portion of zone 14.

It follows that Finneran et al is also totally silent about the feature of present claim 10, wherein means are provided for feeding carbamate in aqueous solution coming from the urea recovery section to the stripping unit and in particular to the high pressure stripping unit.

Again, Van Wijck is not prior art available against the present application. Further, Van Wijck is concerned with a plant resulting from the combination of a

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urea stripping plant with a melamine plant, wherein the off gas released during the melamine synthesis are used in the urea plant. The plant according to Van Wijck does not disclose a urea recovery section, wherein urea is separated from carbamate in aqueous solution. The urea solution leaving units E and F, where carbamate decomposition takes place and ammonia and carbon dioxide vapors are separated, respectively, is all fed to tank H in the form of a urea melt to be used in the integrated melamine plant. It also follows that the feature of providing means for feeding such a carbamate in aqueous solution to the high pressure stripper is totally missing from the disclosures of Van Wijck.

As discussed above, this last feature is also missing from Finneran et al. Thus, even if the cited documents were combined, Applicants' claimed invention would not be obtained.

In particular, the combination of the urea recovery section teaching of Finneran et al in the plant of Van Wijck, wherein the carbamate present in the urea solution leaving unit F through line 8 is further decomposed and the resulting vapors condensed in additional stripper and condensing units, respectively, corresponding to zone 22 of Finneran et al, could have merely resulted in returning the thus obtained carbamate solution to the condenser C. In any event, such a combination would have never resulted in the feeding of the carbamate to the stripper E, since this is against the teaching of Finneran et al, and even more

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clearly, not to a high-pressure stripping unit (such as stripper B in Van Wijck or unit 2 in present claim 10), which is missing from Finneran et al.

It is also respectfully submitted the one skilled in the art would not consider Finneran et al and Van Wijck to be analogous art and would not have considered combining these their disclosures, since they are concerned with totally different plant constructions.

The above arguments also apply to independent claim 14.

Additionally, as previously set forth in the prior responses, and as described at page 3, lines 19-28 of the present application, the further decomposing in the high pressure stripper the carbamate solution separated in the urea recovery section allows to recycle to the synthesis reactor very low amounts of water, thereby unexpectedly increasing its conversion yield. This result is clearly not disclosed nor expected by the cited art.

For the above reasons, it is respectfully submitted that the subject matter of claims 10 and 14 is neither taught by nor made obvious from the disclosures of Finneran et al and Van Wijck and it is requested that the rejection under 35 U.S.C. §103(a) be reconsidered and withdrawn.

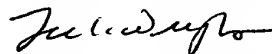
In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal

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or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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